REMARKS

Claims 1-39 were examined and reported in the Office Action. Claims 1-39 are rejected. Claims 1, 9, 14, 20, 26 and 33 are amended. New claims 40-43 are added. Claims 1-43 remain. Attached hereto is a marked-up version of the amendments to the application as indicated above.

Applicant requests reconsideration of the application in view of the following remarks.

I. 37 CFR § 1.71(a)-(c)

It is asserted in the Office Action that the specification is objected under 37 CFR § 1.71(a)-(c) to for failing to adequately teach how to make and/or use the invention. Specifically, it is asserted that the specification fails to show how the "encoder" (claim 1) or the "decoder" (claim 9), can perform the claimed functions. It appears that this objection stems from claim 1 only reciting the limitation of an encoder and a function, and claim 9 only reciting a decoder and a function. Applicant has amended claims 1 and 9 to overcome the 37 CFR § 1.71(a)-(c) objection.

Accordingly, withdrawal of the 37 CFR § 1.71(a)-(c) objection for the specification is respectfully requested.

II. 35 U.S.C. § 112, first paragraph

It is asserted in the Office Action that claims 1-39 are rejected 35 U.S.C. § 112, first paragraph, for the reasons asserted with respect to the 37 CFR § 1.71(a)-(c) objection to the specification (recited above in section I). Specifically, claims 1 and 9 are subjected to an undue breadth rejection. Applicant has amended claims 1 and 9 to overcome the 35 U.S.C. § 112, first paragraph rejection.

Accordingly, withdrawal of the 35 USC § 112, first paragraph objection for the specification is respectfully requested.

III. 35 U.S.C. § 102(b)

It is asserted in the Office Action that claims 1-3, 8-11, 13-16, 19-23, 25, 27-28, 32, 34-35 and 37-39 are rejected in the Office Action under 35 U.S.C. § 102(b), as being anticipated by U.S. Patent No. 6,138,092, issued to Zinser Jr. et al. ("Zinser"). Applicant respectfully disagrees.

Applicant's amended claim 1 contains the limitations of "[a]n encoder comprising: an epoch locator coupled to a frame assembly, a primary epoch analyzer coupled to the epoch locator, and a secondary epoch analyzer coupled to the primary epoch locator, wherein the encoder compresses a plurality of signals at variable frame rates based on a plurality of prioritized parameters to dynamically reduce signal bandwidth while preserving perceptual signal quality."

Applicant's amended claim 9 contains the limitations of "[a] decoder comprising: a frame disassembly and parameter decoding unit coupled to an excitation generator; a synthesizing filter coupled to the excitation generator; and an output scaling and filtering unit coupled to the synthesizing filter, wherein the decoder decompresses a plurality of compressed signals at variable frame rates based on a plurality of prioritized parameters to dynamically reduce signal bandwidth while preserving perceptual signal quality."

Applicant's claim 14.contains the limitations of "[a] program storage device readable by a machine comprising instructions that cause the machine to: receive a plurality of signals from a first transmission device; encode the plurality of signals in a compressed format; and transmit the plurality of signals in a compressed format through a transmission medium at variable frame rates based on a plurality of prioritized parameters to dynamically reduce signal bandwidth while preserving perceptual quality of the signals."

Applicant's claim 20 contains the limitations of "[a] program storage device readable by a machine comprising instructions that cause the machine to: receive the plurality of signals in a compressed format through a transmission medium at variable frame rates based on a plurality of prioritized parameters to dynamically reduce signal bandwidth while preserving perceptual quality of the signals; decode

the plurality of compressed signals; and transmit the decoded signals to a first receiving device."

Applicant's claim 26 contains the limitations of "[a] method comprising: receiving a plurality of signals from a transmission device; encoding the plurality of signals in a compressed format; and transmitting the plurality of signals in a compressed format through a transmission medium at variable frame rates based on a plurality of prioritized parameters to dynamically reduce signal bandwidth while preserving perceptual quality of the signals."

Applicant's claim 33 contains the limitations of "[a] method comprising: receiving a plurality of signals in a compressed format through a transmission medium at variable frame rates based on a plurality of prioritized parameters to dynamically reduce signal bandwidth while preserving perceptual quality of the plurality of the signals; decoding the plurality of compressed signals; and transmitting the decoded signals to a receiving device."

In other words, Applicant's claimed invention relates to Apparatus, methods and processes using a dynamic variable bandwidth technique for compressing and decompressing digitized audio signals. Applicant's claimed invention dynamically adjusts the amount of bandwidth required for transmission by selecting a number and quantization level of transmitted parameters. Thus, Applicant's invention can dynamically adjust to an available bandwidth on a transmission media.

According to MPEP 2131, "'[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.' (Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). 'The identical invention must be shown in as complete detail as is contained in the ... claim.' (Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)). The elements must be arranged as required by the claim, but this is not an ipsissimis verbis test, i.e., identity of terminology is not required. (In re Bond, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990))."

Zinser discloses a code book technique for tracking and reproducing pitch and voice decisions using an encoder and a decoder subsystem. The invention disclosed

by Zinser incorporates a process for dealing with pitch harmonics outside the normal framing range of linear prediction coding (LPC) voice encoders. Zinser does not teach, disclose or suggest compressing or decompressing a plurality of signals at variable frame rates based on a plurality of prioritized parameters to dynamically reduce signal bandwidth while preserving perceptual signal quality.

Therefore, since Zinser does not disclose, teach or suggest all of Applicant's amended claims 1, 9, 14, 20, 26 and 33 respective limitations as listed above, Applicant respectfully asserts that a *prima facie* rejection under 35 U.S.C. § 102(b) has not been adequately set forth relative to Zinser. Thus, Applicant's amended claims 1, 9, 14, 20, 26 and 33 are not anticipated by Zinser. Additionally, the claims that depend directly or indirectly on claims 1, 9, 14, 20, and 26, namely claims 2-3 and 8, 10-11 and 13, 17-18, 23-24, and 29-31, respectively, are also not anticipated by Zinser for the above same reason.

Accordingly, withdrawal of the 35 U.S.C. § 102(b), rejections for claims 1-3, 8-11, 13-16, 19-23, 25, 27-28, 32, 34-35 and 37-39 is respectfully requested.

IV. 35 U.S.C. § 103(a)

It is asserted in the Office Action that claims 4-7, 12, 14, 17-18, 20, 23-24, 26, 29-31, 33 and 36 are rejected in the Office Action under 35 U.S.C. § 103(a), as being unpatentable over Zinser in view of U.S. Patent No. 5,809,459, issued to Begstrom et al. ("Begstrom"). Applicant respectfully disagrees.

According to MPEP 2142 "[t]o establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure." (In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)).

As asserted above, Applicant has amended claims 1, 9, 14, 20, 26 and 33 to contain the limitations relating to compressing or decompressing "...a plurality of signals at variable frame rates based on a plurality of prioritized parameters to dynamically reduce signal bandwidth while preserving perceptual signal quality."

As discussed above in section III, Zinser does not teach, disclose or suggest the limitations disclosed in Applicant's amended claims 1, 9, 16, 20, 26 and 33.

Begstrom discloses a method for extracting and tracking pitch using orthogonal error waveforms. Begstrom does not teach, disclose or suggest control of the number and quantization level of transmitted parameters.

Since neither Zinser, Begstrom, nor the combination of the two, disclose, teach or suggest all the limitations contained in Applicant's amended claims 1, 9, 14, 20, 26 and 33, as listed above, there would not be any motivation to arrive at Applicant's claimed invention. Thus, Applicant's amended claims 1, 9, 14, 20, 26 and 33 are not obvious over Zinser in view of Begstrom since a *prima facie* case of obviousness has not been met under MPEP 2142. Additionally, the claims that directly or indirectly depend from Applicant's amended claims 1, 9, 16, 20, 26 and 33, namely claims 4-7, 12 and 14, 17-18, 23-24, 29-31, and 36, respectively, are also not obvious over Zinser in view of Begstrom for the above same reason.

Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejection for claims 4-7, 12, 14, 17-18, 20, 23-24, 26, 29-31, 33 and 36 is respectfully requested.

V. NEW CLAIMS 40-43

According to MPEP 2181, "[a] claim limitation will be interpreted to invoke 35 U.S.C. 112, sixth paragraph if it meets the following 3-prong analysis: (A) the claim limitations must use the phrase "means for" or "step for"; (B) the "means for" or "step for "must be modified by functional language; and (C) the phrase "means for " or "step for " must not be modified by sufficient structure, material or acts for achieving the specified function.

Applicant's new independent claims 40 contains the limitations of "...means for encoding a plurality of input signals at variable frame rates, the means for encoding including: means for identifying input signal segments; means for

extracting a plurality of parameters describing signal segments; and means for associating priority values to the plurality of parameters."

There are several limitations in Applicant's new claim 40 containing the elements necessary to meet the first prong according to MPEP 2181 of "means for." The limitations following the "means for" language in claim 40 include the functional language of "encoding a plurality of input signals at variable frame rates," "identifying input signal segments," "extracting a plurality of parameters describing signal segments," and "associating priority values to the plurality of parameters." The functional language included in claim 40 does not contain structure, material or acts for achieving "encoding," "identifying," "extracting," or "associating." Therefore, according to MPEP 2181, the limitations contained in Applicant's new claim 40 meet the three prong test under MPEP 2181 to invoke 35 U.S.C. 112, sixth paragraph.

Applicant's new independent claims 42 contains the limitations of "...means for decoding a plurality of compressed signals; the decoding means including: means for reconstructing parameters from the plurality of compressed signals; means for constructing an excitation signal; means for producing a raw output signal; and means for producing a final output signal."

There are several limitations in Applicant's new claim 42 containing the elements necessary to meet the first prong according to MPEP 2181 of "means for." The limitations following the "means for" language in claim 42 include the functional language of "decoding a plurality of compressed signals," "reconstructing parameters from the plurality of compressed signals," "constructing an excitation signal," "producing a raw output signal," and "producing a final output signal." The functional language included in claim 42 does not contain structure, material or acts for achieving "decoding," "reconstructing," "constructing," "producing " or "producing" (second occurrence). Therefore, according to MPEP 2181, the limitations contained in Applicant's new claim 42 meet the three prong test under MPEP 2181 to invoke 35 U.S.C. 112, sixth paragraph.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending, namely Claims 1-43, patentably define the subject invention over the prior art of record and are in condition for allowance and such action is earnestly solicited at the earliest possible date.

If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,

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Dated: December 11, 2002

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CERTIFICATE OF MAILING:
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Box FEE, Amendments, Commissioner for Patents, Washington, D.C. 20231 on December 11, 2002.

Linda D'Elia December 11, 2002

SL/lmd

Attachment: Version with Markings to Show Changes Made

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

The claims have been amended as follows:

1. (Twice Amended) An ~~apparatus~~ encoder comprising:

an epoch locator coupled to a frame assembly~~encoder~~,

a primary epoch analyzer coupled to the epoch locator, and

a secondary epoch analyzer coupled to the primary epoch locator,

wherein the encoder ~~to~~ compresses a plurality of signals at variable frame rates based on a plurality of prioritized parameters to dynamically reduce signal bandwidth while preserving perceptual signal quality.

9. (Twice Amended) ~~An apparatus~~ decoder comprising:

a ~~decoder~~frame disassembly and parameter decoding unit coupled to an excitation generator;

a synthesizing filter coupled to the excitation generator; and

an output scaling and filtering unit coupled to the synthesizing filter,

wherein the decoder ~~to~~ decompresses a plurality of compressed signals at variable frame rates based on a plurality of prioritized parameters to dynamically reduce signal bandwidth while preserving perceptual signal quality.

14. (Twice Amended) A program storage device readable by a machine comprising instructions that cause the machine to:

receive a plurality of signals from a first transmission device;

encode the plurality of signals in a compressed format; and

transmit the plurality of signals in a compressed format through a transmission medium at variable frame rates based on a plurality of prioritized

parameters to dynamically reduce signal bandwidth while preserving perceptual quality of the signals.

20. (Twice Amended) A program storage device readable by a machine comprising instructions that cause the machine to:

receive the plurality of signals in a compressed format through a transmission medium at variable frame rates based on a plurality of prioritized parameters to dynamically reduce signal bandwidth while preserving perceptual quality of the signals;

decode the plurality of compressed signals; and

transmit the decoded signals to a first receiving device.

26. (Twice Amended) A method comprising:

receiving a plurality of signals from a transmission device;

encoding the plurality of signals in a compressed format; and

transmitting the plurality of signals in a compressed format through a transmission medium at variable frame rates based on a plurality of prioritized parameters to dynamically reduce signal bandwidth while preserving perceptual quality of the signals.

33. (Twice Amended) A method comprising:

receiving a plurality of signals in a compressed format through a transmission medium at variable frame rates based on a plurality of prioritized parameters to dynamically reduce signal bandwidth while preserving perceptual quality of the plurality of the signals;

decoding the plurality of compressed signals; and

transmitting the decoded signals to a receiving device.

New claims 40-43 are added.